

## REPORTS

### **ASFA: Back from the Edge and Moving towards a New Horizon**

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#### **Abstract**

Since its establishment in 1971, ASFA has steadily grown its partnerships and database, paying increasing attention to developing countries' needs. However, its technologies and partnership model have failed to keep pace with modern developments. In order to address this, the FAO ASFA Secretariat has decided to implement a new Business Model by 2023, and will work with its stakeholders, including the Impact and Strategies Working Group and Strategic Advisory Group, to ensure ASFA remains a valued information product. The new business model will ensure ASFA meets FAO strategic objectives and wider goals of increasing access and dissemination of aquatic sciences and fisheries information. Several analyses have been performed by the ASFA Secretariat and others, which have informed ASFA's direction. Work has already progressed on a number of areas that will be discussed in this presentation, specifically: ASFA technologies (new input software; online controlled vocabulary); ASFA collaborations (partnering with FAO departments and projects as well as external collaborations); and ASFA partnership model (a new Publishing Agreement with increased access for institutions in developing countries). However, a number of areas of work are to be determined, one of them being the MOU between FAO and IAMSILIC. Updating the MOU could lead to better collaboration between IAMSILIC and ASFA, in line with FAO goals, especially in the area of digital preservation.

**Keywords:** Aquatic Sciences and Fisheries Abstracts, ASFA, information systems, bibliographic databases, partnerships, business models.

#### **Introduction**

Aquatic Sciences and Fisheries Abstracts (ASFA) started in 1971 as a monthly abstract journal. Since then, ASFA has undergone many changes both to its Product and to the Partnership.

As of today, the main ASFA Product is an online ASFA Database available on the ProQuest platform – as part of the package or as a stand-alone product to commercial ProQuest customers (on subscription) and free of charge to contributing ASFA Partners (as an entitlement) as well as to a number of fisheries and aquatic science institutions in Low Income and Food Deficit Countries (LIFDC).

The ASFA Partnership is currently (as of October 2019) comprised of four UN co-sponsoring partners, 10 international partners, 51 national partners, more than 40 collaborating centers and the publishing ASFA partner (ProQuest). All ASFA partners sign the Partnership Agreement with FAO. FAO and ProQuest roles and responsibilities as regards the production and distribution of the ASFA information products as well as ASFA partner's entitlements are defined by the Publishing Agreement, which is renewed every four years; the most recently signed Agreement will cover the period 2020-2023.

All the ASFA related work is coordinated by the ASFA Secretariat, which is provided by FAO and located at its Headquarters in Rome, Italy. FAO holds and administers the ASFA Trust Fund which is a collective property of the ASFA Partners; it was established by the ASFA Advisory Board and maintained through the accumulation of royalties from the sale of the ASFA Products by the ASFA Publisher. The Funds are spent via Trust Fund Proposals which are intended to maintain/improve the ASFA system and agreed by the Partnership by vote. Currently, only ASFA Partners are eligible to submit proposals.

### **Why ASFA Needs a New Business Model**

The era of technological advances and Open Access are growing influences on information-seeking behavior, presenting both challenges and opportunities to ASFA.

During the last decade, ASFA had some **decline in usage and awareness**. The Survey on the Information Needs of Fisheries and Aquatic Science Sector (December 2018) reveals that 32.22% out of 568 respondents from 49 countries had not heard of ASFA, whereas Information Managers were the most likely Professional Group to have used ASFA. ASFA will address this imbalance by enhanced communication and promotional activities in order to reach all the target groups of users in all sectors, including education, science and industry, and to ensure that they are aware of and feel confident using ASFA. Significant efforts will be made to improve the database coverage and availability of the full text and grey literature.

Another challenge which needs to be addressed is the number of ASFA **partners who drop off and withdraw from the partnership**. A number of partners were removed from partnerships or withdrew their participation in ASFA (ICES – 2016, NACA -2018, Australia – 2016, Belgium – 2015, Bulgaria – 2018, Germany – 2016, Ghana – 2018, Guinea – 2018, Lithuania – 2003), and a particular matter of concern is the high rate of withdrawals by institutions in developed countries. In addition, the number of ASFA partners that do not submit any input to the ASFA database has increased (29 in 2018, compared to 22 in 2014) for various reasons, which include: technical problems, staff turnover causing loss of knowledge, and shifts in organizational priorities. These problems will be addressed by introducing a new Partnership scheme and developing new ASFA software.

Although ASFA's financial situation can still be considered good, this is mainly thanks to the savings accumulated during previous years. ASFA funding is provided by royalties paid to the ASFA Trust Fund by the commercial publisher ProQuest, as well as by FAO, which is covering most of the expenses relating to hosting the ASFA Secretariat, including staffing costs. Starting

from 2008 the **royalties have been decreasing** and the annual amount ASFA receives now as royalties is less than a half of what was received 10 years ago. There are also some **doubts over continued support from FAO**. FAO requires both Administrative changes and Reporting and Evaluation changes, so ASFA has to show how it meets FAO goals in order to receive continuing support. ASFA has addressed these threads by negotiating a new Publishing Agreement (2020-2023) with ProQuest and by developing and implementing a new FAO ASFA Project.

Based on the above, it is obvious that in order to remain a valued and unique information product, ASFA has to modernize. The 2018 ASFA Advisory Board Meeting (11-15 June 2018, Oostende, Belgium) introduced the need for ASFA to change, stating that “ASFA can no longer afford the ‘business as usual’ approach and must adapt in order to retain its position as the leading database for aquatic science, fisheries and aquaculture information.”

The current ASFA Business Model is built around a “commercial only product” where the ASFA database is only accessible to subscribers (except for the ASFA partners and selected institutions in LIFDC countries that have free access to the database). With the royalties decreasing, this option is no longer a viable way to sustain the work of the ASFA Partnership as it is not in line with FAO Open Data and Open Access policies, risking the withdrawal of FAO support should ASFA to continue to only work towards a closed access, subscription database.

Possible new business models proposing different levels of free access to the ASFA products and services were presented by the ASFA Secretariat and discussed by the ASFA Impact Evaluation Working Group and the Strategic Advisory Group (SAG), which was set up in January 2019 and is composed of experts working in aquatic sciences or agriculture information services and networks.

Completely free access to the ASFA database would enable greater flexibility for ASFA to participate in projects and partnerships with UN and other organizations and would also greatly increase access to information. However, on the other side, it would mean the end of royalties paid by ProQuest and, as a result, financial unsustainability for ASFA. In addition, ProQuest provides the hosting and search functionality of the ASFA database, and without a system in place to replace it, breaking with the relationship with ProQuest risks information no longer being available online. The decision was therefore taken to explore a slower, more cautious route to increasing access of ASFA information products. Moving towards a business model that would have a higher degree of free access to the ASFA products while at the same time maintaining a collaboration with a commercial publisher is currently seen as the most efficient way to go in coming years. A new ASFA business model is to be adopted by 31<sup>st</sup> December 2021.

### **ASFA in 2020-2021**

The major ASFA activities planned for the next two-year period (2020-2021) include but are not limited to the following:

1. Development and implementation of the new software.
2. Focus on grey literature.

3. Implementation of a new partnership scheme.
4. Development of new freely accessible products.
5. Diversifying funding schemes through participation in FAO and non-FAO projects.
6. Enhancing existing, and entering into new, collaborations.
7. Efforts on communication and promotion.
8. Knowledge sharing.
9. More efficient administration.

### ***New ASFA Software***

A new business model for ASFA foresees development of the new software as critical to its successful implementation.

The current software, www-ASFA-ISIS, has been used as the ASFA input software since 2002. The software became obsolete, as it can only be run on Windows operating systems with 32-bit architecture, which therefore requires Windows 7. It produces bibliographic records in ISO 2709 output format, which does not easily translate to modern formats such as XML, and the software itself is only available as a closed system downloaded onto an individual user's computer. Therefore, there is no opportunity for making ASFA records openly accessible using the current software.

The ASFA Secretariat has selected new ASFA software – a Virtual Research Environment (VRE) - that will be provided by [D4Science.org](https://www.d4science.org/), legally represented by CNR (National Research Council of Italy). Work is to start in early 2020 and will include three months development and one month testing phases. The software will be cloud- based, it will allow multiple connections by ASFA inputters at a time, will have more functionalities and an integrated metadata harvesting tool. The ASFA Software Working Group has been established to assist with implementation and testing of the new software and have already begun mapping the current ASFA metadata fields to Dublin Core in order to improve interoperability with other information systems and simplify ASFA's metadata structure where appropriate.

### ***Focus on Grey Literature (GL)***

ASFA has begun work on a GL strategy to improve its monitoring, recording and reporting of grey literature coverage on its database. Changes to be implemented include:

- Increasing access to grey literature by working in partnership with OA repositories (including harvesting from OAI-PMH compliant repositories);
- Using open source software to manage its indexing and search tools, allowing them to be utilized by, and receive contributions from, a greater number of users to aid the discoverability of grey literature;
- Ensuring comprehensive and timely coverage of grey literature among its global partnership, and providing funding for small specific projects which meet ASFA's grey literature priorities regards subject scope and content type;
- Working with the Open Science community in a Virtual Research Environment (VRE) – such as iMarine – to ensure a two-way interaction between the Open Science movement and the promotion of grey literature in the future.

A draft GL Strategy was presented at the 2019 ASFA Advisory Board Meeting and will be finalized by ASFA's Impact and Strategies working group.

### ***Implementation of New Partnership Scheme***

In order to increase free access to ASFA and in line with the FAO's mandate of increasing access to knowledge, ASFA has introduced changes to its partnership model by implementing the Associates scheme. The scheme, as negotiated with ProQuest, shall initially run from January 1<sup>st</sup> 2020 – December 31<sup>st</sup> 2021, at which point it shall be reviewed.

A new Publishing Agreement (2020-2023) negotiated between FAO and ProQuest foresees providing complimentary access to the ASFA database to aquatic institutions that would not otherwise be able to afford access to the database, with an upper limit of 200 institutions.

In order to become an ASFA Associate, institutions must satisfy the following criteria: (1) be an aquatic sciences, fisheries or aquaculture institution which produces scientific or technical literature; (2) be willing to explore contributing to ASFA, for example this could include contributing ASFA records to the database; (3) permit their institutional repository to be harvested, or participating on one of ASFA's working groups; (4) complete a quarterly online survey on usage of the ASFA Database; (5) be unable to currently subscribe to the ASFA Database or fulfill the responsibilities of an ASFA Partner. Institutions will be identified by FAO with the help of National ASFA Partners. ProQuest agreement will be needed for an institution's participation in the scheme. Preference to joining ASFA Associates will be given to institutions in LIFDC and developing countries.

### ***New Open Access Products***

The ASFA Subject Vocabulary has recently been converted to SKOS-XL and migrated to VocBench3. The ASFA Controlled Vocabulary is a multilingual knowledge product which is now freely accessible and downloadable as a separate Concept Scheme on the AGROVOC platform (<http://agrovoc.uniroma2.it/skosmosAsfa/asfa/en/index>). The ASFA Vocabulary complements existing FAO information products such as AGROVOC through alignment of terms, and connects to external vocabularies via Linked Open Data, thus ensuring connectivity and searchability through an increasingly wide range of resources.

ASFA has established the Vocabularies Working Group which supports the development of subject thesaurus and will help with ongoing maintenance of vocabularies on new platform. Interested ASFA Partners were trained in vocabulary management using VocBench at the 2019 ASFA Advisory Board Meeting, and future training events are planned.

### ***New Projects – Diversifying Funding Streams***

For ASFA to remain sustainable, it cannot rely on one source of funding (i.e. royalties paid into the ASFA Trust Fund by the Publisher) only. The ASFA Secretariat makes efforts to identify other sources of funding and considers involvement in a number of FAO projects, including CECAF-PESCAO, Registry of Aquatic Genetic Resources (AqGR) and AGRIS. Such involvement, if

successful, would not only provide additional funding, but would allow ASFA to contribute its records, tools and expertise to FAO fisheries and aquaculture projects.

### ***Enhanced Collaborations***

ASFA has long-standing collaboration with IAMSILIC, formalized in 2005 by signing the MOU between FAO and IAMSILIC. The joint activities include but are not limited to the following: (1) utilization of the ASFA Trust Fund to pay IAMSILIC membership fees for the ASFA Partner institutions that not able to meet the costs of yearly subscriptions for financial and/or administrative reasons – currently, 37 active subscriptions are paid through the ASFA Trust Fund; (2) ASFA partners promote and provide content to the Aquatic Commons digital repository – a number of ASFA Trust Fund digitization projects has been completed; (3) Participation by the ASFA Secretariat in the Aquatic Commons Board.

ASFA is looking forward to enhanced collaboration with IAMSILIC in the years to come. A list of possible joint activities is to be included in the new Annex (2020-2021) to MoU which has already been drafted by the ASFA Secretariat and presented to the IAMSILIC Executive Board for their consideration.

The ASFA Advisory Board has discussed and agreed that for the next 4-year period (2020-2023) subscriptions will be renewed each year without formal Board approval. The Board has also approved the mandatory requirement to upload documents digitized as part of the ASFA Trust Fund projects into the AC or OceanDocs [or joint repository]. ASFA supports establishment of a joint IAMSILIC-IODE-ASFA repository which would create synergies between ASFA, IAMSILIC and IODE in terms of content recruitment, metadata editing and indexing. ASFA will consider contributing to an ongoing maintenance of a merged IAMSILIC-IODE repository if created.

### ***ASFA Communications and Promotion***

ASFA will continue making significant efforts to enhance communication and promotion. A number of promotional materials, including bookmark, leaflet and newsletter have been prepared and distributed by the ASFA Secretariat in 2018-2019. ASFA will collaborate with WorldFish on a newsletter design and development of new promotional materials, such as Top Tips, Interactive Timelines, Exposure Stories, maps, and Social Media Toolkits.

### ***ASFA Administration and Coordination***

In order to bring ASFA activities in line with FAO rules and regulations, a new ASFA project has been developed and will run from 2020-2023. The changes will affect the way the ASFA Trust Fund is administrated. A four-year budget (2020-2023) has been approved by ASFA partners and further planning and reporting will be done according to FAO requirements. Formal governance of ASFA foresees the active involvement of five working groups (WG) which will assist the Secretariat in implementing improvements to the ASFA policies, technologies, products and partnership:

- Impact and Strategies WG – the group decides the strategic focus of ASFA, and was formally the Impact and Evaluation Working Group;
- Vocabularies WG – the group manages and maintains the ASFA Subject Thesaurus;

- Software WG – the group activities are focused on implementing new input software and recommending new technologies for ASFA;
- Partnership Agreement WG – the group is tasked to update the ASFA Partnership agreement;
- ASFA 50<sup>th</sup> Anniversary Working Group – the group will undertake activities in preparation for ASFA's 50<sup>th</sup> anniversary in 2021.

## **Conclusion**

ASFA has very ambitious long-term targets but will be working patiently with its stakeholders to ensure that change happens at the required pace and results in the desired outcomes without loss of financial sustainability or engagement from partners.

For ASFA to remain a sustainable project it needs, in addition to benefitting from technological advances and reaching out to wide range of users, to pay special attention to maintaining active connections with existing partners and to developing new collaborations. We do believe that the ASFA Partnership is critical for the success of the project and is fundamental in ensuring the continued growth in number and expertise for the benefits of users in aquatic and fisheries sectors.

